## REMARKS

The Examiner indicated that claims 24-30 are allowed. Applicants gratefully acknowledge the Examiner's indication of allowed subject matter.

The Examiner indicated that claims 3-7 and 15-19 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, Applicants have so rewritten claims 3, 5, 15, and 17 in independent form, and Applicants gratefully acknowledge the Examiner's indication of allowable subject matter.

The Examiner objected to claim 16.

The Examiner rejected claims 1-2, 8-14 and 20-23 under 35 U.S.C. §102(b) as allegedly being anticipated by "Survey of Computer-Aided Electrical Analysis of Integrated Circuit Interconnections", Ruehli (referred hereafter Ruehli).

Applicants respectfully traverse the claim objection and the §102 rejections, with the following arguments.

## Claim Objection

The Examiner objected to claim 16, stating that "[c]laim 16, line 1, "claim 16" should read -claim 13-".

In response, Applicants have amended claim 16 to depend from claim 15 rather than from claim 13, because "said nearest neighbor adjusted electrical resistance" in claim 16 has antecedent basis in claim 15 but not in claim 13.

## 35 U.S.C. §102(b)

The Examiner rejected claims 1-2, 8-14 and 20-23 under 35 U.S.C. §102(b) as allegedly being anticipated by "Survey of Computer-Aided Electrical Analysis of Integrated Circuit Interconnections", Ruchli (referred hereafter Ruchli).

Applicants respectfully contend that Ruehli does not anticipate claims 1 and 13, because Ruehli does not teach each and every feature of claims 1 and 13. In particular, claims 1 and 13 have been amended to include all of the limitations stated as follows in the Examiner's reasons for allowance of claims 24-26 and 29 in the office action, pages 7-8:

"The reason for allowance of the claims 24-26 and 29 is the inclusion of the steps of specifying a description of N electrical networks comprised by a first substrate including specification of a plurality of first ports on a first side of the substrate for each electrical network electrically isolated from one another and specification of a plurality of second ports on a second side of the substrate for each electrical network electrically connected to a common voltage and computing for each electrical network the N electrical networks an unadjusted electrical resistance between each first port and a port of the second ports collectively satisfying acceptance criteria".

Based on the preceding arguments, Applicants respectfully maintain that Ruchli does not anticipate claim 1, and that claim 1 is in condition for allowance. Since claims 2 and 8-12 depend from claim 1, Applicants contend that claims 2 and 8-12 are likewise in condition for allowance. Since claims 14 and 20-23 depend from claim 13, Applicants contend that claims 14 and 20-23 are likewise in condition for allowance.

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In addition, Applicants respectfully contend that Ruehli does not teach the following feature of claims 8 and 21:

"calculating a voltage at each said first port, given an electrical current specified at each said first port" (claim 8); and

"providing a design of the at least one  $\underline{N}$  electrical networks comprised by the substrate" (claim 21).

## CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 09-0457.

Date: 07/18/2025

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